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REMARKS

Applicants thank the Examiner for the consideration given the present application. Claims 1 and 15 are amended to more clearly define the claimed invention. Claim 22 is dependent on claim 1 and is added to recite another embodiment of the invention. It is respectfully submitted that no new matter is entered. It is believed that this Amendment is fully responsive to the Office Action mailed March 7, 2007.

The present invention is directed to a culture apparatus for culturing samples on containers inside a chamber adjusted to predetermined ambient conditions, where a container transport device disposed inside the chamber centrally thereof includes a transport table for placing the container thereon and a drive mechanism for driving the transport table in the directions of the X- and Y-axes, which are orthogonal on a horizontal plane, and the Z-axis, which is orthogonal to these directions. A container accommodating rack is disposed on each of opposite sides of the transport device, which sides are along the direction of the X-axis, the accommodating rack having container accommodating portions in the direction of the Y- and Z-axes for accommodating therein respective containers. The container is movable into or out of the desired container accommodating portion of the desired rack by the transport device.

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The container accommodating rack includes a plurality of stackers arranged in the direction of the Y-axis, each of the stackers including container accommodating portions repeatedly provided in the direction of the Z-axis. The chamber has an opening facing the direction of the Y-axis and a door for closing the opening. The plurality of stackers forming the accommodating rack is mounted on a drawer installed on a base and slidable in the direction of the Y-axis, the plurality of stackers being withdrawable, along with the drawer, through the opening with the door opened. The chamber has a container inlet with a carriage mechanism connected thereto for transporting the container into the chamber, and a shutter mechanism is attached to the chamber for opening and closing the container inlet.

The container carriage mechanism contains a container carrier on which the container is mounted and moved in the direction of the X-axis, the container carrier formed with a pair of supports for supporting the container at opposite sides in the direction of the Y-axis. The transport table can be moved to a position under the container supported by the supports, and the transport table can be raised between the supports. The container is lifted from the container carrier by the transport table raised from the position under the container supported by the supports of the container carrier. Such an apparatus is not taught or suggested in the prior art.

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Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over KaviEFF (U.S. Patent No. 4,883,401) in view of Yahiro (U.S. 6,228,636), Gonska (U.S. Patent No. 6,568,770), and Walters (U.S. Patent No. 5,657,720). Reconsideration and withdrawal of this rejection are respectfully requested.

Amended independent claim 1 is directed to a culture apparatus having a plurality of features, including a container carriage mechanism that has a container carrier on which the container is mounted and moved in the direction of X-axis, the container carrier being formed with a pair of supports for supporting the container at the opposite sides in the direction of Y-axis, where the transport table can be moved to a position under the container supported by the supports, and the transport table can be raised between the supports, and where the container is lifted from the container carrier by the transport table raised from the position under the container supported by the supports of the container carrier.

This additional feature is described in the specification as filed, e.g., at page 30, line 20, through page 31, line 17. In addition, transport table (50) is illustrated in, e.g., FIGS. 6, 9, and 10(A).

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The container carrier (410) of the container carriage mechanism (4) and the transport table (50) of the present invention provides reliable passing of containers with a simple structure.

It is respectfully submitted that Kavieff discloses a storage apparatus where a chamber has a container inlet for transporting the container into the chamber, the container inlet being operably connected to a carriage mechanism (FIGS. 2:34). With respect to passing of a container between the transport table (FIG. 3:25) having the container placed thereon and the carriage mechanism (FIG. 2:34), Kavieff merely discloses that "handling means (28) includes a mechanism having movable pins which engage a handle slot (23) and push the article (21) into or pull it from a compartment (20). See column 3, lines 39-49. Thus, there is no disclosure of passing of containers from the container carrier to the transport table as in the present invention.

It is respectfully submitted that none of the cited references discloses or suggests passing containers from a container carrier to a transport table as in the presently claimed invention. For at least this reason, claim 1 is patentable. Removal of this rejection is respectfully requested.

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Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over KaviEFF (U.S. Patent No. 4,883,401) in view of Weselak (U.S. Publication No. 2003/0031602) and Barbera-Guillem (U.S. Patent No. 6,673,595). Reconsideration and withdrawal of this rejection are respectfully requested.

Independent claim 15 recites a culture apparatus where the delivery time for a plurality of containers in a chamber is monitored based on stacker-type information and identification information, and includes an additional limitation for a plurality of types of stackers capable of accommodating containers of different sizes.

In claim 15, the storage means stores stacker-type information of each of the stackers that defines a container size accommodatable in the stacker, and identification information provided on each of the containers, the information having registered therein the container size and a predetermined date and time. The control means compares the size of a container to be accommodated, registered in the read identification information, with the container size accommodatable in the stacker, defined by the stacker type information stored in the storage means, to extract a stacker capable of accommodating the container, and controls the operation of the container transport device toward one container accommodating portion of the extracted stacker.

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Thus, the culture apparatus of claim 15 allows for monitoring the delivery time for and transfer of the containers in the chamber with respect to a plurality of types of stackers capable of accommodating containers of different sizes, as shown in FIGS. 5(a) and 5(b).

In contrast, although paragraphs [0016]-[0019] of Weselak indicate that the shelves contain identification information that allows a user to consistently keep track of shelf location and what samples containers are located on a specified shelf, Weselak still fails to disclose monitoring the delivery time for and transfer of the containers in the chamber with respect to a plurality of types of stackers capable of accommodating containers of different sizes.

It is respectfully submitted that none of the cited references has such a disclosure. Accordingly, claim 15 is patentable, and removal of this rejection is respectfully requested.

Added claim 22 includes the limitations of more specific structures of the transport table and the container carrier of claim 1. As shown in FIG. 10(a), the transport table (50) has a plurality of projections that project outwardly of the transport table (5) and are formed spacedly on opposite sides thereof. Each of the projections is formed with a wall surface for holding the container between opposite wall surfaces to restrict movement of the container, as can be seen in FIG. 10(b). The container carrier (410) includes on opposite

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sides thereof a pair of supports for supporting the container, as shown in FIG. 4. The supports are formed with a plurality of spaced-apart projections, as shown in FIGS. 12 and 13, that project inwardly of the container carrier (410).

When the container is passed from the container carrier to the transport table, the container carrier is in the chamber, as shown in FIG. 14, and the transport table is moved to a position under the container on the container carrier. The transport table is then raised from this position, thereby lifting the container from the container carrier. The projections of the transport table (50), and the projections of the container carrier (410) are arranged in staggered positions so as not to interfere with each other.

Such a staggered arrangement allows the transport table (50) to be formed with the projections with the wall surface and the container carrier (410) to be formed with projections with the wall surface. This formation of the wall surface ensures that the container is reliably held on the container carrier (410), passed onto the transport table (50), and then reliably held on the transport table (50).

It is respectfully submitted that the cited references do not describe the structure of the transport table and container carrier set forth in claim 22, which is patentable.

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It is believed that claims 1, 15, and 22 are patentable, and allowance of the present application is respectfully requested. However, if any issues of a minor nature remain, the Examiner is urged to telephone Applicants' undersigned attorney at 202-659-2930.

Applicants hereby request a one-month extension of time in which to file this reply. Please charge the one-month extension fee of \$120 to Deposit Account No. 01-2340. The Commissioner is hereby authorized to credit any overpayment or charge any required fee not otherwise paid, including application processing, extension, and extra claims fees, to Deposit Account No. 01-2340.

Respectfully submitted,
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